What is claimed is:

1. A method of detecting a position of a first transducer assembly with respect to a second transducer assembly, the method comprising:

at the first transducer assembly, receiving magnetic field signals from the second transducer assembly, the magnetic field signals including communication data; and

based on magnitudes of the magnetic field signals received on the first transducer assembly, identifying a position in space of the first transducer assembly with respect to the second transducer assembly.

2. A method as in claim 1 further comprising:

based on the magnitudes of the magnetic field signals received on at least two uniquely oriented transducers of the first transducer assembly, identifying an orientation of the first transducer assembly with respect to the second transducer assembly.

3. A method as in claim 1, wherein the first transducer assembly supports i) receiving data communications from the second transducer assembly, and ii) transmitting data communications to the second transducer assembly.

4. A method as in claim 1, wherein receiving the magnetic field signals includes:

on a first transducer unit of the first transducer assembly dedicated for receiving non-encoded communication signals, receiving a first set of magnetic field signals from the second transducer assembly;

utilizing the first set of magnetic field signals to identify location and an orientation of the first transducer assembly with respect to the second transducer assembly;

on a second transducer unit of the first transducer assembly dedicated for receiving communication signals, receiving a second set of magnetic field signals from the second transducer assembly; and

decoding the second set of magnetic field signals to retrieve data transmitted from the second transducer assembly.

5. A method as in claim 4 further comprising:

from the second transducer assembly, i) transmitting the first set of magnetic field signals based on a first carrier frequency, and ii) transmitting the second set of magnetic field signals based on a second carrier frequency.

6. A method as in claim 1 further comprising:

utilizing a map at the first transducer assembly to identify the position of the first transducer assembly.

7. A method as in claim 1 further comprising:

utilizing an equation at the first transducer assembly to identify the position of the first transducer assembly with respect to the second transducer assembly.

8. A method as in claim 1 further comprising:

at the first transducer assembly, measuring the magnitudes of the magnetic field signals received at the first transducer assembly; and

from the first transducer assembly, transmitting the magnitudes of the magnetic field signals as encoded data to the second transducer assembly.

9. A method as in claim 8 further comprising:

utilizing a map at the second transducer assembly to identify a location and an orientation of the first transducer assembly.

10. A method as in claim 8 further comprising:

utilizing an equation at the second transducer assembly to identify a location and an orientation of the first transducer assembly with respect to the second transducer assembly.

11. A method as in claim 1, wherein the first transducer assembly includes M uniquely oriented transducers, where M is an integer equal to one or more; and

wherein the second transducer assembly includes N uniquely oriented transducers, where N is an integer equal to one or more.

12. A method as in claim 11, wherein M equals 2 and N equals 2.

13. A method as in claim 12, wherein the M uniquely oriented transducers in the first transducer assembly are substantially orthogonal with respect to each other and the N uniquely oriented transducers in the second transducer assembly are substantially orthogonal with respect to each other.

14. A method as in claim 2 further comprising:

utilizing the identified orientation of the first transducer assembly to determine which of multiple sets of data to transmit from the second transducer assembly to the first transducer assembly via the magnetic field signals.

15. A method as in claim 1 further comprising:

tracking a movement of the first transducer assembly with respect to the second transducer assembly over time; and

based on the tracked movement, identifying a velocity associated with the first transducer assembly.

16. A method as in claim 15 further comprising:

initiating an action in response to the identified velocity associated with the first transducer assembly.

17. A method as in claim 1 further comprising:

tracking a movement of the first transducer assembly with respect to the second transducer assembly over time; and

based on the tracked movement, identifying an acceleration associated with the first transducer assembly.

18. A method as in claim 17 further comprising:

initiating an action in response to the identified acceleration associated with the first transducer assembly.

19. A method as in claim 1 further comprising:

detecting an orientation and a location of the second transducer assembly with respect to the first transducer assembly based on steps of:

at the second transducer assembly, receiving magnetic field signals transmitted from the first transducer assembly; and

based on magnitudes of the magnetic field signals received on at least two uniquely oriented transducers of the second transducer assembly, i) identifying a location in space of the second transducer assembly with respect to the first transducer assembly, and ii) identifying an orientation of the second transducer assembly with the first transducer assembly.

20. A method as in claim 1 further comprising:

at a third transducer assembly, receiving the magnetic field signals transmitted from the second transducer assembly; and

based on magnitudes of the magnetic field signals received on at least two uniquely oriented transducers of the third transducer assembly, identifying a relative location of the third transducer assembly with respect to the second transducer assembly.

21. A method as in claim 20 further comprises:

from the second transducer assembly, i) transmitting a first set of magnetic field signals to the first transducer assembly based on a first carrier frequency, and ii) transmitting a second set of magnetic field signals to the third transducer assembly based on a second carrier frequency.

22. A method as in claim 1 further comprising:

positioning the second transducer assembly to have a known orientation at a fixed location; and

attaching the first transducer assembly to a movable object having a random orientation and location with respect to the second transducer assembly.

23. A method as in claim 1, wherein the first transducer assembly and the second transducer assembly may be randomly moved and oriented with respect to each other over time.

24. A method as in claim 1 further comprising:

at the first transducer assembly, receiving magnetic field signals from a third transducer assembly; and

based on magnitudes of the magnetic field signals received on at least two uniquely oriented transducers of the first transducer assembly from the third transducer assembly, i) identifying a relative location of the first transducer assembly with respect to the third transducer assembly, and ii) identifying an orientation of the first transducer assembly with the third transducer assembly.

25. A method as in claim 1 further comprising:

modifying the magnetic field signals transmitted by the second transducer assembly based on positioning of an object in a vicinity of the second transducer assembly.

26. A method as in claim 24 further comprising:

from the second transducer assembly, transmitting a first set of magnetic field signals to the first transducer assembly based on a pre-selected carrier frequency;

from the third transducer assembly, transmitting a second set of magnetic field signals to the first transducer assembly based on the pre-selected carrier frequency; and

utilizing time-division multiplexing techniques to transmit the first set of magnetic field signals and the second set of magnetic field signals during different timeframes.

27. A method as in claim 1 further comprising:

utilizing time-division multiplexing techniques to transmit, via use of a common carrier frequency, a first set of magnetic field signals and a second set of magnetic field signals from the second transducer assembly during different timeframes.

28. A method as in claim 27 further comprising:

at the first transducer assembly, receiving the first set of magnetic field signals;

utilizing the first set of magnetic field signals to identify the relative location and orientation of the first transducer assembly with respect to the second transducer assembly;

at the first transducer assembly, receiving the second set of magnetic field signals; and

utilizing the second set of magnetic field signals to receive encoded data communicated from the second transducer assembly to the first transducer assembly.

29. A method as in claim 1 further comprising:

generating an asymmetrical magnetic field signal to the first transducer assembly from the second transducer assembly based on simultaneous transmissions on a first transducer and a second transducer,.

30. A method as in claim 29, wherein the first and second transducers are aligned along a common axis and the polarities of the first and second transducer generating the asymmetrical magnetic field are positioned at opposite ends of each other.

31. A method as in claim 1 further comprising:

based on the identified position of the first transducer assembly with respect to the second transducer assembly, adjusting a strength of the magnetic field signals transmitted from the second transducer assembly.

32. A method as in claim 1, wherein the second transducer assembly includes a single transducer for generating the magnetic field signals, and wherein the first transducer assembly includes a single transducer to receive the magnetic field signals.

33. A method as in claim 1 further comprising:

adjusting a strength of the magnetic field signals transmitted from the second transducer assembly to provide secure communications between the second transducer assembly and the first transducer assembly.

34. A method as in claim 1 further comprising:

positioning the second transducer assembly to have a known orientation with respect to a gravity vector; and

identifying an orientation of the first transducer assembly with respect to the gravity vector.

35. A method as in claim 1 further comprising:

attaching the first transducer assembly to a person for monitoring an orientation and location of the person; and

communicating orientation and position information of the person from the first transducer assembly to the second transducer assembly.

36. A method as in claim 35 further comprising:

from the second transducer, communicating the orientation and location information from the second transducer device to a notification device

37. A method as in claim 1 further comprising:

disposing the first transducer assembly in a headset system to detect an orientation and location of the headset with respect to a fixed location; and

selectively transmitting encoded audio data from the second transducer assembly to the first transducer assembly depending on the location and the orientation of the headset.

38. A method as in claim 1 further comprising:

identifying the location of the first transducer assembly in three-dimensional space.

39. A method as in claim 1 further comprising:

disposing the first transducer assembly in a game controller device to detect an orientation of the controller with respect to a fixed location; and

selectively transmitting encoded audio data from the first transducer assembly to the second transducer assembly depending on the orientation of the game controller.

40. A method as in claim 39, wherein identifying the orientation of the game controller includes identifying a yaw, pitch and roll associated with the game controller.

41. An apparatus for detecting spatial attributes in an inductive coupling, the apparatus comprising:

a transducer assembly for receiving magnetic field signals which include encoded data;

an electronic circuit that measures magnitudes of the magnetic field signals received on at least two uniquely oriented transducers of the transducer assembly;

a processor device that utilizes the measured magnitudes of the magnetic field signals to identify a relative location and orientation of the transducer assembly; and

a decoding device for extracting encoded data from the magnetic field signals.

42. An apparatus as in claim 41, wherein the processor device utilizes a map to identify the relative location and the orientation of the transducer assembly.

43. An apparatus as in claim 41, wherein the processor device utilizes an equation to identify the relative location and the orientation of the transducer assembly. respect to the second transducer assembly.

44. An apparatus as in claim 41, wherein the transducer assembly includes M substantially orthogonal transducers, where M is an integer greater than one; and

wherein the transducer assembly receives the magnetic field signals from a remote station including N substantially orthogonal transducers, where N is an integer equal to one or more.

45. An apparatus as in claim 41, wherein the transducer assembly includes a single transducer; and

wherein the magnetic field signals are generated by a single transducer in a remotely located base station.

46. An apparatus as in claim 41, wherein the apparatus is attached to a person for monitoring an orientation and location of the person and the transducer assembly supports communicating orientation and location information of the person from the transducer assembly to a remote station.

47. An apparatus as in claim 41, wherein the apparatus is a headset system and the transducer assembly detects an orientation and location of the headset with respect to a base station at a fixed location, the base station selectively transmitting encoded audio data to the headset depending on the location and orientation of the headset.

48. A method of detecting a location of a transducer assembly, the method comprising:

receiving a magnetic field signal on a single transducer of the transducer assembly, the magnetic field signal including communication data from a source generating the magnetic field signal; and

based on receipt of the magnetic field signal on the single transducer of the transducer assembly, identifying the location of the transducer assembly.

49. A method as in claim 48 further comprising:

receiving magnetic field signals from the source;

synchronizing the transducer assembly for receiving the magnetic field signals from the source in different timeframes;

receiving a first magnetic field signal from the source in a first timeframe, the first magnetic field having a first orientation; and

receiving a second magnetic field from the source in a second timeframe, the second magnetic field having a second orientation.

50. A method as in claim 49, wherein the first magnetic field and second magnetic field are received from the source based on a common carrier frequency.

51. A method as in claim 48, wherein receiving the magnetic field signal includes receiving the magnetic field signal generated by a single transducer associated with the source.

52. A method as in claim 48, wherein identifying the location of the transducer assembly includes identifying the location of the transducer assembly in at least two dimensions.

53. A method as in claim 48, wherein identifying the location of the transducer assembly includes identifying the location of the transducer assembly in three-dimensional space.

54. A method as in claim 48 further comprising:

based on the received magnetic field signal, identifying an orientation of the transducer assembly.

55. A method as in claim 48, wherein the transducer assembly supports i) receiving data communications from the source on the single transducer, and ii) transmitting data communications back to the source on the single transducer.

56. A method as in claim 48, wherein the source includes multiple uniquely oriented transducers to generate the magnetic field signal in different axial directions.

57. A method as in claim 48 further comprising:

based on the received magnetic field signal, identifying an orientation of the transducer assembly; and

utilizing the identified orientation of the transducer assembly to determine which of multiple sets of data to transmit from the source to the transducer assembly via the magnetic field signal.

58. A method as in claim 48 further comprising:

positioning the source to have a known orientation at a fixed location;

attaching the transducer assembly to a movable object having a random orientation and location with respect to the source; and

tracking the location and orientation of the movable object.